K. NAKANO LAB.

Safe and Comfort Mobility for Everyone



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Mechanical and Biological Systems Control http://www.knakanolab.iis.u-tokyo.ac.jp/english/index_en.htm

Based on the fundamental fields of mechanics, vibration and control, research is carried out on condition monitoring, ergonomics, human-machine interface, automated driving and cooperative systems related to mobility. Non-technical issues, called ELSI, are also addressed with the aim of implementing these technologies in society. The main research topics are

- 1. Evaluation of Performance of Shared Control
- Haptic Steering Assistance Based on Prediction of the Future Trajectory in Line with the Intention of the Driver
- 3. Evaluation of Human Machine Interface for Vehicle infrastructure Cooperative Driver Assistance
- 4. Understanding and Optimizing Situational Acceptance in Automated Driving
- 5. Trajectory Prediction of Surrounding Vehicles Based on Traffic Scenario Understanding
- 6. Energy Harvesting in Rotating Body
- 7. Estimation of Condition Between Rail and Wheel from Measured Values of a PQ Wheelset
- 8. Unified Traffic Control System for Railway and Road Vehicles Using Mobile Phone Line
- 9. Driving Assistance for Electric Wheelchairs at Pedestrian Crossings and Railroad Crossings Using Infrastructure to Vehicle Communication
- 10. Activities to Realize Level 4 Cooperated Automated Mobility Service

11. Building the Method for Social Implementation of Automated Driving Technology Complying with Actual State Based on ELSI

